

general average observed in Germany. Pelvic contraction is 2.77 times more frequent in negro than in white women. Among white women in America, contracted pelvis occurs in 7 per cent., which is as frequent as in many German cities, in Paris, and more frequent than in Vienna. The necessity for pelvimetry becomes evident if these results are taken into consideration.

Inversion of the Uterus Occurring After Labor.—In the *Wiener klin. Wochenschrift*, 1899, No. 16, BRAUN describes the case of a primipara, aged twenty-four years, of feeble development, who was delivered spontaneously of a large child, and in whom retention of the placenta made curetting necessary. She recovered from this labor, and in her second pregnancy the presence of twins was diagnosed. They were delivered spontaneously, as were the placenta. No pressure was made upon the uterus nor traction upon the umbilical cord. The womb, however, became suddenly inverted, and profuse hemorrhage occurred. The uterus was at once replaced and packed with iodoform gauze, the patient making a good recovery. In the absence of manipulation this case seems to illustrate the influence of a feeble and relaxed condition in determining inversion of the uterus.

The Technique of Cæsarean Section.—In the *Wiener klin. Wochenschrift*, 1899, No. 16, ROSSA reports two cases of rachitic pelvis in which delivery was accomplished by Cæsarean section, employing the transverse incision across the fundus, as recommended by Fritsch. In both the patients made good recoveries, the operations being entirely successful.

Adhesion of the Membranes as a Cause of Delayed Labor.—In the *Centralblatt für Gynäkologie*, 1899, No. 19, LÖHLEIN draws attention to the fact that in some cases where delay in labor is thought to be due to deficient contraction of the uterus it is really caused by adherence of the membranes to the lower portion of the uterus. He could detect but fifteen of these cases in 3000 births, or 0.5 of 1 per cent.

The diagnosis was made by introducing the finger and sweeping it about the internal os, when it should move freely about the uterus and the membranes. If adhesions of the membranes can be readily separated labor will promptly go on. If, however, this fails the membranes should be ruptured, when the delay will cease. He describes two typical cases which illustrate his statements.

Cæsarean Section with Fritsch's Transverse Incision.—In the *Centralblatt für Gynäkologie*, 1899, No. 19, a number of cases of this operation are reported by four different operators.

THUMIN, in Landau's clinic in Berlin, reports a successful case of Cæsarean section delivered by Fritsch's transverse incision. The stitches passed through the decidua in this case, but no complications resulted.

BRAITENBERG, in the clinic at Innsbruck, reports a case operated upon by Ehrendorfer. In this patient the incision came directly across the fundus upon the placenta, which was attached at this point. No dangerous loss of blood followed, however, and the operation was brought to a conclusion with-

out difficulty. Ergotine was injected during the operation. Mother and child made a good recovery.

SEIDENTOFF, of Magdeburg, reports three operations, two performed by himself and one by Dahlmann. In the first case the operation proceeded smoothly. A few days afterward the temperature rose and the lochia was found to have ceased. This returned after an intra-uterine douche. In case second labor had progressed so far that the contraction ring was plainly present. No difficulty, however, was found in delivering the child. The uterus did not contract; profuse hemorrhage occurred, but ceased upon packing the womb with gauze and bringing the end of the gauze out through the vagina. The patient finally made a good recovery. In case third cancer of the cervix was present and the case was inoperable. The child was delivered by the transverse incision into the uterus and survived the operation. The mother's convalescence was retarded by suppuration in the abdominal wound, which was thought to have been caused by her frequent coughing. From this, however, she recovered, although nothing could be done for the cancer.

PERLIS reports from the hospital in Kiew, Russia, the case of a pregnant patient who had cancer of the uterus. She was too far advanced for a radical operation, and accordingly she was placed in Trendelenburg's position, the abdomen opened, and the uterus opened by transverse incision of the fundus. She was delivered of a living child and recovered completely from the operation.

OTOLOGY.

UNDER THE CHARGE OF

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Gunshot-wounds of the Ear.—T. ROSATI (*Ann. des mal. de l'Oreille*, p. 166, August, 1898) concludes, after numerous experiments, that, on account of the extraordinary resistance of the temporal bone, pistol balls penetrate with great difficulty as far as the cranial cavity. In most instances surgical intervention for the discovery of the ball is full of difficulties, not only on account of the uncertainty of the point of arrest of the projectile, but also because of its altered shape and the serious condition of the wounded. If no obstacles exist the ball should be removed at once. Radiography has not furnished any aid to the writer in searching for projectiles lodged in the cranial bones. The organ of hearing is always more or less seriously injured by such wounds. Usually total and permanent deafness is the result.

Artificial Closure of Cicatrized Perforations of the Membrana Tympani.

—A. DE SIMONI (*Ann. des mal. de l'Oreille*, August, 1898, p. 160) has employed with success trichloroacetic acid applied to the cicatrized edges of perforations in the membrana tympani, in order to bring about their closure. He subjected twenty-one patients to this treatment in Gradenigo's public clinic in Turin, but was only able to follow out the treatment in fourteen. Of them eleven were healed and three were still under treatment. Great care must

be exercised not to allow the acid to reach any part but the edges of the perforation, as entrance of the acid into the drum-cavity is extremely painful.

Treatment of Acute Otitis Media.—S. C. LARSEN (*Archiv f. Ohrenhr.*, November 30, 1898) has made some very interesting and valuable investigations concerning the treatment of acute otitis media occurring in sixty-five previously healthy soldiers in the Garrison Hospital in Copenhagen. His object was to find out the treatment of middle-ear suppuration, after perforation of the membrana has occurred, which will prevent complications and bring about healing of the ear most quickly. Inflation of air into the tympana as well as insufflations of antiseptic powder in the ear were excluded in all cases. The patients were divided into four classes, viz.:

1. Those not placed in bed and treated without antiseptic instillations ($\frac{1}{4}$ to 1000 bichloride).
2. Those not placed in bed and treated with the antiseptic instillations.
3. Those placed in bed and not treated with instillations.
4. Those placed in bed and treated with instillations.

In all cases the ears were mopped out and then stopped with sterilized absorbent cotton.

The duration of the disease does not seem to be much if at all influenced by remaining in bed; but remaining in one's room until suppuration ceases seems to shorten the disease.

The duration of the acute suppuration was six days less in those patients treated without instillations than in those treated with instillations, external relations being equal. This is a specially important conclusion, inasmuch as Larsen began his observations with the belief that antiseptic instillations in the ear in acute otitis media were of service. Respecting the duration of the disease, the advantage was decidedly in favor of the "absolutely dry treatment with sterile cotton tampons." Those cases in which prompt paracentesis was performed healed more rapidly than those in which spontaneous perforation occurred. Fotor of the discharge set in only in those cases treated with the antiseptic drops. Granulations sprang up in eight cases, seven of which were treated with antiseptic drops in the ear and one by the dry method. Prolapse of the mucous membrane of the drum-cavity in five cases, none of which was treated by the dry method. Acute mastoiditis occurred only in cases treated by instillations in the ear.

The absolutely dry treatment, with sterilized cotton tampons, decidedly prevents complications, but it does not appear that remaining in bed has any influence either way upon the production of complications.

Chronic Suppurative Otitis Media in a Tuberculous Patient; Abscess of the Brain; Trepanation by Way of the Mastoid.—M. COVILLE and E. LOMBARD (*Ann. des mal. de l'Oreille*, etc., November, 1898) have recorded their observation of a case of abscess of the brain which they were able to open and drain by way of the mastoid and middle ear. Classical symptoms of brain abscess were wanting in this, excepting diffuse headache and intellectual hebetude. The temperature and pulse, contrary to the rule in such cases, were markedly above normal. The first operation, trepanation of the mastoid only, gave no relief. The temperature and pulse remaining unaltered, it was decided that there yet remained an unopened collection of pus in the brain. At the second operation, three days later, the antrum, aditus,

and attic were exposed according to the method of Stacke-Zanf. As the bone was found altered in appearances in the tympanic region, the aditus and the inner parts of the antrum, the tegmen tympani was cautiously opened into the cranial cavity and the dura then exposed over an area the size of a dime. The dura was then found to be congested and friable. Suddenly in the front part of this opening in the bone a thin stream of pus was seen to escape. Puncture of the dura now led to escape of pus from the cavity of an abscess in the brain, 2 to 3 cm. in depth. A small drain was then introduced into the abscess-cavity, and the wound was tamponed with iodoform gauze. On account of the weak condition of the patient he was given an injection of 1500 grammes of artificial serum. The next day the patient was free from hebetude and headache, and expressed himself as being very comfortable. However, symptoms of general metastatic pyæmia set in, and the man succumbed about two weeks after the last operation. He was far gone in phthisis when brought to the hospital for treatment of his head symptoms.

The Electric Lathe and Burr in Operations on the Mastoid and Petrous Portions of the Temporal Bone.—E. LOMBARD (*Ann. des mal. de l'Oreille*, September, 1898), after numerous trials, has formulated the following conclusions regarding the use of the electro-motor burr in operations on the mastoid and petrous parts of the temporal bone: 1. It is more exact. It does not slip as easily as the chisel and gouge, and if it does slip the result is not serious. 2. There is no risk of wounding parts that should be carefully protected, as the facial nerve, the semicircular canal, the sinus, and the dura. If one of these organs is reached the spheroidal form of the burr pushes the tissue ahead of it without cutting or wounding it. In breaking down the wall of the aditus with a burr the surgeon may dispense with the protector and almost with the probe. 3. The shock of the blows from the mallet is avoided. 4. The operation is more rapid, a fact not to be despised in an operation always long if it is to be complete. 5. The cavity made is smooth; no angles, asperities, or scales. 6. If the apophysis is eburnated, which is not uncommon in cases of chronic purulent otitis media, the burr is always successful if properly used with sufficient force. Lombard thinks the burr is specially useful in separating the sinus wall from its osseous canal. Overheating of the burr is prevented by the necessary pauses in the operation.

Thiersch's Transplantation of Flaps After Mastoid Trepanation.—KARL REINHARD (*Archiv f. Ohrenh.*, November 30, 1898) maintains that in cases in which all diseased tissue has been removed from the exposed mastoid and middle-ear cavities, after a radical operation for that purpose, transplantation of skin-flaps from the arms and legs will be followed by epidermization of the wound much more rapidly than by the method of tamponing. Transplantation of skin-flaps is, as Reinhard says, very difficult and often fails. He states that even in cases in which the flaps have all failed to adhere "that it will be found that beneath the detached flaps small gray-white points will be found from which, as secretion diminishes, cicatrization (skin) takes place."

[We cannot suppress the thought that in such cases epidermization would have occurred without transplantation of skin from the skin tissues of the region about and in the wound cavity.—ED.]

Experimental Results of Poisonous Doses of Quinine and Salicylic Acid Upon the Auditory Apparatus of Animals.—KIRCHNER (*Berliner klin. Wochenschrift*, 1881, No. xci.) claimed that doses of from one to two grammes of quinine and from three to five grammes of salicylate of soda, given to cats, dogs, and guinea-pigs, produced in a few hours hyperæmia and hemorrhages in the middle ears, the internal ears, and fourth ventricle. The large doses of quinine killed cats and dogs in from five to eight hours, death being ushered in with symptoms resembling those of suffocation. The objection was soon raised to his conclusions that the results in the ears, on which they were based, were due to strangulation and not to the poisonous effects of the drugs given the animals.

C. GRUNERT (*Archiv f. Ohrenh.*, November 30, 1898) has recently made some experiments on white mice and pigeons in order to determine whether "suffocation could produce destructive changes in the auditory organ similar to those produced by Kirchner's poisonous doses of quinine, etc."

By these experiments with suffocation Grunert could produce hyperæmia of the auditory organ but not extravasations, whereas Kirchner evoked by his experimental drugs not only great hyperæmia but extensive blood extravasations in the endolymphatic spaces, functionally the most important spaces in the auditory apparatus. Grunert, therefore, believes that the "above-named extravasations of blood in the ductus cochlearis, for example, as produced by Kirchner, must be the result of specific, poisonous action of the drugs, induced, perhaps, through the great injury sustained by the blood-vessels of the tract under consideration."

A practical conclusion drawn by Kirchner and confirmed by Grunert is that if the internal ear is unduly congested by an overdose of quinine or salicylic acid it can never recover its function. [Caution demands the avoidance of large doses at a time to the human being.—ED.]

Acute Otitis Media.—In the acute inflammatory stage of otitis media, GORHAM BACON (*New York Polyclinic*, January 15, 1898) holds that it is important to apply the artificial leech at once, close to the tragus, and endeavor to abort the disease. If the drumhead bulge a free incision should be made into it. This should be done only under the guidance of the eye and with the aid of good illumination. If the free incision is not made and proper drainage not established there would be great danger of the otitis media becoming chronic. If the disease become chronic in the attic, the perforation should be enlarged and the endeavor made to wash out the secretion with a syringe. Granulations should be destroyed by the application of chromic acid or by the use of the curette. If this treatment failed a cure could be effected in many cases by excision of the ossicles and curetting the attic. Some of the results of chronic otitis media are the formation of granulations and polypi, caries of the ossicula and temporal bone, mastoid disease, suppurative meningitis, cerebral abscess, and septicæmia. In cases of acute otitis media, if the temperature remains high after the incision of the drum membrane and the opening of the mastoid cells, one should think of a complicating pneumonia or, perhaps, of a sinus thrombosis. In cases of acute mastoid disease the operation should not be deferred until redness and œdema of the tissues over the mastoid appear and the auricle stands

out prominently from the head. In making the diagnosis the two mastoid processes should be compared, as in some persons pressure on an uninfamed mastoid process causes pain. In the first stage of mastoid inflammation, secondary to acute suppurative otitis media, after incision the artificial leech should be applied and also the Leiter cold coil; but the latter should not be left on for more than forty-eight hours, for if the symptoms have not subsided by that time immediate operation is indicated. The incision should be made close to the auricle, from the tip to the upper border of the pinna. This incision can be enlarged in both directions if complications exist. When pus is found in the antrum and upper part of the mastoid it should be remembered that the tip might contain pus, and if this is not liberated it may burrow down into the tissue of the neck and give rise to septicæmia. When caries of the tympanic roof takes place a collection of pus is frequently found in the temporo-sphenoidal lobe.

A. H. BUCK (*New York Polyclinic*, January 15, 1898) said with the early stage of acute otitis media one must choose between hot and cold applications. In his opinion, both of these agents are vasomotor stimulants, and they relieve the pain through this vasomotor action by diminishing the pressure on the sensory nerve-fibres of the inflamed part. Heat had no power to benumb sensation, while cold would do so when carried beyond a certain point. This very application of cold, therefore, served to mislead us, for it is largely by the persistence of pain that we are informed of the necessity of going further and operating. The application of ice appeared to be getting very popular in this country, and for this reason he felt called upon to emphasize the fact that it was a very deceptive agent. ROBERT ABBE (*New York Polyclinic*, January 15, 1898) said that the discussion on Dr. Bacon's paper on "Suppurative Otitis Media and its Complications" had shown most clearly the great risk of allowing a purulent otitis to go on after the onset of serious symptoms. Hemorrhage, sinus pyæmia, and cerebral abscess were the great dangers to be feared. If the mastoid was operated upon quite early the involvement of the sinus would be exceedingly slight. If, however, the operation was deferred, the signs and symptoms of sinus pyæmia would soon make their appearance—tenderness and induration along the jugular vein.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

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The Action of Streptococci and of Their Toxins on the Various Organs of the Body.—The whole number of *Ziegler's Beiträge für pathologischen Anatomie*, 1899, Band xxv., Heft 1, is devoted to a study by HOMÉN and his